OBJECTIVES: The purpose of this study was to estimate the preferences of postmenopausal women for disease states associated with EBC. **METHODS:** Preferences for relevant health states and demographic information were obtained from women aged 55–70 years in the UK and the USA with a history of stage one or two operable EBC and experience with adjuvant hormonal therapy. The 14 health states included in the study, which were compiled from literature and input from oncologists, reflected the major disease states of breast cancer and the adverse events reported in the ATAC trial (Cancer 2003; 98:1802–10). A chained standard gamble (SG) technique was used to compare health states to perfect and worst health (WH) and then WH against perfect health and death. WH values were used to rescale values (0 = death, 1 = perfect health). Pooled and country-specific utilities were analysed and compared. **RESULTS:** A total of 67 subjects (UK = 23, USA = 44) successfully completed the SG interviews. There were few differences between country samples. For the pooled sample, mean age was 67.8 years, 49% were retired, 61% were living with someone, and 51% had arthritis. More US than UK women had received radiotherapy and/or chemotherapy. Raw WH values differed significantly between country samples (UK = 0.844, USA = 0.455; $p < 0.001$). Adjusted mean SG scores were 0.432–0.974 for the pooled sample, 0.710–0.989 for the UK sample, and 0.288–0.965 for the US sample. Mean current health values for the pooled, UK and US samples were 0.907, 0.933 and 0.893, respectively. **CONCLUSIONS:** The order of adjusted and unadjusted SG scores within each country was consistent, with the metastatic breast cancer and disease-free survival with no adverse events health states being the least and most preferred, respectively. When comparing utilities across countries, care must be taken in cases of significantly different WH values.

Session II

CARDIOVASCULAR II

CV5

THE COSTS AND EFFECTS OF CLOPIDOGREL IN COMPARISON TO ASA OR PLACEBO FOR SEVERAL PATIENT POPULATIONS IN DENMARK

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BACKGROUND: CAPRIE was an international randomized double blind trial comparing clopidogrel and ASA in patients with recent MI, stroke or PAD. Post-hoc analyses of the CAPRIE database identified three high-risk subgroups in which improved risk reductions were observed of clopidogrel compared to ASA. **OBJECTIVE:** To estimate the long and short term costs and effects of clopidogrel versus ASA in Denmark in the prevention of ischemic events (MI, IS, VD) in three high-risk CAPRIE subpopulations: 1) patients with a history of coronary artery bypass grafting; 2) patients with a history of ischemic events; 3) patients with multiple vascular territory involvement. In addition to this, an analysis for ASA intolerant patients in the general CAPRIE population was performed. **METHODOLOGY:** A Markov model consisting of 24 health states that combined clinical, epidemiological and cost data was used to assess the cost and effects of clopidogrel in comparison to ASA. Only in the ASA intolerant patients, clopidogrel was compared to no treatment. **RESULTS:** The comparison of clopidogrel with ASA in the high-risk CAPRIE sub-groups resulted in cost-effectiveness ratios of DKK 25,445 (€ 3424) /LYG, DKK 51,198 (€ 6881)/LYG, and DKK 55,503 (€7460)/LYG for 1) patients with a history of coronary artery bypass grafting; 2) patients with a history of ischemic events, and 3) patients with multiple vascular territory involvement respectively. The comparison of clopidogrel to no treatment for the ASA intolerant patients resulted in DKK 3093 (€416)/LYG. Cost-effectiveness ratios of this order are generally considered acceptable in modern Western societies. Internal and external validity have been tested and were ascertained. **CONCLUSION:** Clopidogrel may be considered a cost-effective treatment for the prevention of subsequent ischemic events in high-risk patient populations and in the general CAPRIE-population with ASA intolerance in Denmark. Extensive sensitivity analyses confirmed that these results were stable over the entire range of assumptions.

CV6

WHAT IS THE ADDED VALUE OF HEALTH RELATED QUALITY OF LIFE (HRQL) DATA? AN EXAMPLE FROM THE INTERNATIONAL SUBARACHNOID ANEURYSM TRIAL (ISAT)

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OBJECTIVES: The International Subarachnoid Aneurysm Trial (ISAT) has revealed significantly better clinical outcomes for patients randomised to endovascular treatment as measured using the modified Rankin scale (mRS). ISAT compared the proportion of patients with a mRS grade of three or over (indicates higher level of impairment and dependency) following endovascular or neurosurgical treatment. The HRQL data were explored to determine whether there are differences in patients ranked 0–2 on the mRS as well as three or over. **METHOD:** A sub-sample of ISAT patients from 8 UK centres completed a thorough assessment of HRQL (SF-36 and Functional Limitations Profile) and cognitive function at 12 months following treatment. HRQL data are reported here. Differences were tested using one-way ANOVA with post-hoc comparisons (LSD) between mRS grades. **RESULTS:** Every domain of the SF-36 declines significantly with deteriorating mRS grade. The post-hoc comparisons reveal that each grade is significantly worse than the next lower grade, apart from grades four and five. Patients within the 0–2 mRS range still report substantial declines in HRQL (PF is 90.1 at grade zero (n = 137), to 66.6 at grade 2 (n = 144); VT is 71.6 at grade zero and 39.9 at grade two; BP is 93.7 at grade zero and 64.0 at grade 2). Sample sizes for grades 3 and over are small, but the data indicate that little sensitivity to differences in HRQL outcomes in patients at these higher mRS grades. **CONCLUSIONS:** The HRQL data greatly elucidates the differences in health status for patients at different mRS grades. The HRQL data demonstrate that simply categorising patients using a single cut-off score on the mRS is a very crude way of measuring outcomes. Most of the decline in HRQL scores occurs in the 0–2 range.

CV7

MODELLING SURVIVAL AND COSTS IN SWITZERLAND OF NESIRITIDE VERSUS INOTROPIC THERAPY FOR ACUTE DECOMPENSATED HEART FAILURE

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OBJECTIVES: To estimate survival and costs of nesiritide versus dobutamine or milrinone in patients admitted for acute decompensated heart failure (ADHF) using Swiss University hospital costs. **METHODS:** We constructed a decision analytic model of hospitalisation for ADHF. Subjects started in a hospitalisation state. Survivors at discharge could be re-hospitalised or die based on a 6-month Markov process with monthly cycles. Data on survival and length of stay (LOS) in intensive care or general ward were tabulated for 9239 patients admitted for heart failure to

United States hospitals included in the ADHERE patient registry. All benefits were assumed to accrue in the index hospitalisation and treatment-specific lengths of stay were estimated after adjusting for prognostic indicators. A constant factor was used to adjust US LOS estimates to reflect Swiss patterns. Age-specific all-cause mortality at six months was derived from the literature. Treatment costs are reported in 2003 Swiss francs (CHF) and include: hospital per diems (from a sample of university hospitals, and including physician costs) and medications for heart failure. The base-case was estimated for patients aged 75 years with moderate left ventricular dysfunction (ejection fraction 35–44%). **RESULTS:** For 1000 subjects admitted with ADHF, the number of subjects surviving at six month was estimated to be: 837 for initial treatment with nesiritide, 826 for dobutamine, and 833 for milrinone. The total cost of treating these cohorts is estimated at CHF 9.0 million for nesiritide, CHF 10.2 million for dobutamine, and CHF 11.9 million for milrinone. **CONCLUSIONS:** Based on available data, the base-case shows that nesiritide is at least as effective as inotrope therapy at reducing mortality in persons admitted to hospital for ADHF. While the acquisition cost of nesiritide is higher than that for the inotropes nesiritide is less costly than inotropic therapy at six months in Swiss university hospitals.

CV8

PHARMACOECONOMIC CONSEQUENCES OF PRIMARY AND SECONDARY PREVENTION OF CARDIOVASCULAR DISEASES IN THE CZECH REPUBLIC

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OBJECTIVES: After 1990, it was recognised that the male population's life expectancy increased relatively quickly. This elongation was significant in decreasing the mortality rate from diseases of the circulatory system, mainly ischemic heart diseases. **METHODS:** Regression cost analysis was used for analysis of databases such as OECD Health Data, The Ministry of Health and Statistic institution of the Czech Republic. **RESULTS:** From the analysis it is evident that decreasing the concentration of cholesterol in blood plasma of the Czech population (mainly HDL cholesterol), an exponential increase in the number of people undergoing cardio surgery and consumption of modern effective drugs have all had positive effects. Use of antihypertensives in the years 1994–2003 has increased by more than ten times. Moreover, use of serum lipid reducing agents has increased significantly by more than 15 times since 1995. In 2002 pharmaceutical expenditures totaled 48,032 billion Czech crowns (1501 billion €). Use per inhabitant was 4681 Czech crowns (151€). Cardiovascular drug use was 19.6% of total volume of drugs in the year 2002. To save one year life in the general population aged 0–69 years as a result decreasing mortality of ischemic heart disease, marginal costs for drugs for cardiovascular diseases was 185,000 Czech crowns (5968€). **CONCLUSIONS:** Drugs for the treatment of the circulatory system play a significant role in drug policy. The rate of reimbursement drugs from public resources remains controversial and problems regarding drug policy in the Czech Republic have not yet been resolved.

CANCER

CN1

TRENDS IN OUTCOMES AND COSTS FOR U.S. PATIENTS WITH ADVANCED NON-SMALL LUNG CANCER 1994–2001

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OBJECTIVES: Patients with advanced nonsmall cell lung cancer have been treated more intensively over the past decade. We sought to see how changes in treatment intensity influenced survival and costs over time. **METHODS:** Patients ages 65+ diagnosed with early stage primary lung cancer were identified from the SEER-Medicare database, a national clinical cancer registry linked to Medicare claims files. Individuals were included if they were diagnosed with locally advanced or metastatic (TNM stages IIIb and IV) NSCLC between January 1, 1994 and December 31, 2001. Kaplan-Meier survival curves were fitted for cohorts diagnosed each year from 1994 to 1999. Lifetime medical costs were calculated for each chemotherapy group using the Kaplan Meier sample average estimator. To determine whether there was a trend in costs over time, a regression model was fitted to lifetime cost estimates for each successive cohort. **RESULTS:** A total of 14,875 patients met inclusion criteria (approximately 2300 per year): 7411 (49.8%) stage IIIb and 7464 (50.2%) stage VI at diagnosis. Proportion of patients receiving procedures in the first three months from diagnosis in 1994 and 1999 were as follows: no procedure: 38%, 31%; surgery: nine percent (9%), seven percent (7%), radiation therapy: 47%, 48%; chemotherapy: 27%, 43%. Survival for patients diagnosed in 1994 was 24% at 12 months and 11% at 24 months. Survival for those diagnosed in 1999 was 27% at 12 and 12% at 24 months (log rank test for equality, $p = 0.57$). In constant dollars, lifetime costs per patient increased from $26,000 to $42,000 over this time period (OLS regression for time trend: $p < 0.002$). **CONCLUSIONS:** Costs of care for patients with advanced NSCLC diagnosed between 1994 and 1999 increased 62% with no change in survival over this time period. Chemotherapy use accounted for the majority of the increases in treatment intensity and cost.

CN2

COST-EFFECTIVENESS ANALYSIS OF RITUXIMAB + CHOP VERSUS CHOP IN PATIENTS WITH AGGRESSIVE NON-HODGKIN LYMPHOMA

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OBJECTIVES: Aim of this study was to evaluate cost-effectiveness of rituximab + CHOP (R-CHOP) versus CHOP, in patients affected by aggressive Non-Hodgkin lymphoma, in the Italian NHS' perspective. **METHODS:** The economic analysis is based on an existing Markov model which was developed in order to evaluate costs and effects for two hypotetical cohorts of patients of age respectively higher and lower than 60 years, over a time frame of 15 years after administration of chemotherapy. The model is based on 5 health states (start therapy, complete response, no response, progression, death) and combines efficacy data from published clinical trials (GELA-98-5) with utilities from the literature and cost of therapies and medical follow-up after chemotherapy, based on Italian treatment patterns. Costs and effects were discounted respectively at 6% and 1,5%. Extensive 1-way and Monte Carlo sensitivity analyses were conducted in order to test the robustness of results. **RESULTS:** For the 2 cohorts (60+; 60–), incremental discounted Life Years Gained with R-CHOP versus CHOP were respectively 1.08 and 1.02 years; incremental QALYs were 1.15 and 1.04; the incremental cost/patient was 14.838€ and 13.938€; the incremental cost/LYG was therefore 13.732€ and 13.717€ and the incremental cost/QALY was 12.879€ and 13.362€, respectively for 60+ and 60– patients. **CONCLUSIONS:** The clinical advantage of R-CHOP is supported by incremental cost/LYG and cost/QALY ratios which fall well below all the thresholds commonly indicated for these values both in the international and italian literature. R-CHOP is a substantial improvement in the treatment of